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EXAMINER
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MOORTHY, ARAVIND K

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/524,285

Filing Date: February 10, 2005

Appellant(s): YOST, WILLIAM HENRY

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Jeffrey D. Hale  
Reg. No. 40,012  
For Appellant

**EXAMINER'S ANSWER**

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This is in response to the appeal brief filed 18 June 2008 appealing from the Office action mailed 1 February 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6826612 B1

Bosloy et al

11-2004

Liao et al, Receiver-initiated Group Membership Protocol (RGMP): a New Group Management Protocol for IP Multicasting, 1999, IEEE, pages 51-58

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**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bosloy et al U.S. Patent No. 6,826,612 B1 in view of Receiver-initiated Group Membership Protocol (RGMP): a New Group Management Protocol for IP Multicasting (hereinafter Liao).

As to claim 1, Bosloy et al discloses a method for optimizing a download of requested data to an electronic data processing unit that is currently receiving unrequested multicast data through a router included in a network, the unrequested multicast data corresponding to at least one multicast data group, the method comprising:

sending Internet Group Management Protocol (IGMP) Leave Messages for the at least one multicast data group to the router [column 4, lines 50-61]; and  
ignoring IGMP Membership Queries for the at least one multicast data group issued by the router so as to cause the router to terminate a transmission of the unrequested multicast data to free up available bandwidth for the download of the requested data [column 9, lines 46-56].

Bosloy et al does not teach that Internet Group Management Protocol (IGMP) is Internet Group Management Protocol (IGMP) V2.

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Liao teaches the use and benefits of Internet Group Management Protocol (IGMP) V2 [page 2].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bosloy et al so that the Internet Group Management Protocol (IGMP) would have been Internet Group Management Protocol (IGMP) V2.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bosloy et al by the teaching of Liao because Internet Group Management Protocol (IGMP) V2, based on IGMP v1, reduces leave latency by incorporating two type of query and two query intervals [page 2].

As to claims 2, 7 and 14, Bosloy et al teaches that the requested data comprises at least one of configuration data and program guide data [column 10, lines 34-50].

As to claims 3, 8 and 15, Bosloy et al teaches that the ignoring step comprises the step of preventing a transmission of an IGMP Membership Report to the router in response to the IGMP Membership Queries [column 6, lines 8-28].

As to claims 4, 9 and 16, Bosloy et al teaches the step of downloading the requested data while the transmission of the unrequested multicast data has been terminated [column 4, lines 12-29].

As to claims 5, 10 and 17, Bosloy et al teaches the step of sensing a receipt of any multicast data so as to identify group numbers of the multicast data [column 8, lines 26-44].

As to claim 6, Bosloy et al discloses in an network having a router, a system for optimizing a download of requested data occurring concurrently with a receipt of unrequested

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multicast data from the router, the unrequested multicast data corresponding to at least one multicast data group, the system comprising:

an electronic data processing unit for sending Internet Group Management Protocol (IGMP) Leave Group Messages for the at least one multicast data group to the router [column 4, lines 50-61], and for ignoring IGMP Membership Queries for the at least one multicast data group issued by the router so as to cause the router to terminate a transmission of the unrequested multicast data to free up available bandwidth for the download of the requested data [column 9, lines 46-56].

Bosloy et al does not teach that Internet Group Management Protocol (IGMP) is Internet Group Management Protocol (IGMP) V2.

Liao teaches the use and benefits of Internet Group Management Protocol (IGMP) V2 [page 2].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bosloy et al so that the Internet Group Management Protocol (IGMP) would have been Internet Group Management Protocol (IGMP) V2.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bosloy et al by the teaching of Liao because Internet Group Management Protocol (IGMP) V2, based on IGMP v1, reduces leave latency by incorporating two type of query and two query intervals [page 2].

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As to claim 11, Bosloy et al teaches a modem connected in between the electronic data processing unit and the router for exchanging information there between [column 3, lines 46-56].

As to claim 12, Bosloy et al teaches that the modem is adapted for use with Asymmetrical Digital Subscriber Line (ADSL) [column 3, lines 46-56].

As to claim 13, Bosloy et al discloses a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for optimizing a download of requested data to an electronic data processing unit that is currently receiving unrequested multicast data through a router included in a network, the unrequested multicast data corresponding to at least one multicast data group, the method steps comprising:

sending Internet Group Management Protocol (IGMP) Leave Messages for the at least one multicast data group to the router [column 4, lines 50-61]; and  
ignoring IGMP Membership Queries for the at least one multicast data group issued by the router so as to cause the router to terminate a transmission of the unrequested multicast data to free up available bandwidth for the download of the requested data [column 9, lines 46-56].

Bosloy et al does not teach that Internet Group Management Protocol (IGMP) is Internet Group Management Protocol (IGMP) V2.

Liao teaches the use and benefits of Internet Group Management Protocol (IGMP) V2 [page 2].

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bosloy et al so that the Internet Group

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Management Protocol (IGMP) would have been Internet Group Management Protocol (IGMP) V2.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Bosloy et al by the teaching of Liao because Internet Group Management Protocol (IGMP) V2, based on IGMP v1, reduces leave latency by incorporating two type of query and two query intervals [page 2].

#### **(10) Response to Argument**

The Appellant argues that the combination of Bosloy and Liao does not teach or even remotely suggest "ignoring IGMP Membership Queries for the at least one multicast data group issued by the router so as to cause the router to terminate a transmission of the unrequested multicast data to free up available bandwidth for the download of the requested data," as recited in claims 1 and 13. The Appellant argues that the combination of Bosloy and Liao does not teach or even remotely suggest "an electronic data processing unit...for ignoring IGMP Membership Queries for the at least one multicast data group issued by the router so as to cause the router to terminate a transmission of the unrequested multicast data to free up available bandwidth for the download of the requested," as recited in claim 6.

The examiner respectfully disagrees. Bosloy discloses that when a router included in the multicast circuit receives notification to terminate support of a particular multicast group (group leave request), data flow with respect to that multicast group is initially maintained on the communication link coupling the router to the hosts. Queries are issued to hosts on the communication link to determine whether continued support of the particular group is desired by any hosts coupled to the communication link. If, while waiting for a positive response to the



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queries issued, a request to join an additional multicast group is received, bandwidth availability on the communication link is examined to determine if adequate bandwidth is available for supporting the newly requested group addition. If adequate bandwidth is available, the newly requested group is added to those groups supported on the communication link. However, if adequate bandwidth for support of the newly requested group is not available, one or more groups that are pending termination (group specific queries have been issued for these groups) are selected for early termination in order to make enough bandwidth available to support the newly requested group addition. The selection criteria utilized to determine the groups to be terminated may be based on a variety of selection parameters. For example, the identity of the host requesting the addition of the new multicast group or the identity of the host requesting that support of the particular group to be terminated. Other selection parameters may include prior usage characteristics corresponding to the groups, a best fit comparison that makes an amount of bandwidth available that is substantially similar to that required for support of the newly requested group, the time a group join or group leave request was received, the contents of the groups being joined or terminated, or an inherent prioritization scheme that prioritizes the various multicast groups in terms of their likelihood of termination. The examiner asserts that when the request are terminated this results in ignoring since the requests are not processed.

The Appellant argues that Bosloy does not even mention IGMP Membership Queries or even Membership Queries let alone ignoring (IGMP) Membership Queries, and further let alone ignoring (IGMP) Membership Queries so as to cause the router to terminate a transmission of the unrequested multicast data. The Appellant argues that an IGMP membership query is not a group join request.

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The examiner respectfully disagrees. Bosloy discloses membership queries. Bosloy discloses that when a group leave request is received from a host on the communication link and a group specific query is issued, the identity of the group to which the group specific query corresponds is added to a set of groups pending termination, which may be referred to as the membership verification set of groups. If a request to add a group to those groups supported on the communication link is received and inadequate bandwidth remains on the communication link to support the addition of the requested group, the membership verification set of groups is examined to select one or more termination groups that will be terminated before the group specific querying process for those particular groups has run to completion. The groups selected for termination are preferably selected in a manner that reduces the likelihood that additional hosts on the communication link will be adversely affected by the termination of the selected groups [column 3, lines 1-33]. As discussed above, Bosloy discloses ignoring membership queries and termination of transmission of unrequested multicast data.

The Appellant argues that Bosloy explicitly discloses a “technique that ONLY terminates groups prematurely when a join request is received” (Bosloy column 9, lines 45-56). The Appellant argues that the use of the word “ONLY” needs to be considered.

The examiner respectfully disagrees. The examiner would like to point out that the Bosloy discloses sending IGMP Leave Messages [column 10, lines 6-33]. But as claimed by the Appellant, sending “Leave Messages” is not the reason to terminate a transmission of the unrequested multicast data to free up available bandwidth for the download of the requested data. As claimed in the current application, the only thing that is being ignored is IGMP Membership Queries. The examiner points out that a join request is an IGMP Membership Query.

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The Appellant argues that there is no teaching, suggestion, or motivation for combining the references. The Appellant argues that not only is there no such teaching, suggestion, or motivation exist, but asserts that Bosloy teaches away from the present principles as claimed. The Appellant refers the Examiner to column 1, lines 58-62 of Bosloy, which discloses "the prior art IGMP standards deal with the inclusion or deletion of particular multicast transmissions, or groups, from the communication link in an inefficient manner that reduce the overall functionality of the multicast system". The Appellant argues that the disclosure in Bosloy clearly and explicitly teaches away from the IGMP standards and the use of their corresponding queries, a combination of Bosloy with Liao is not only taught, nor suggested, nor a result of some motivation to combine, but further Bosloy teaches away from the claimed invention.

The examiner respectfully disagrees. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this instance, Internet Group Management Protocol (IGMP) V2, based on IGMP v1, reduces leave latency by incorporating two types of query and two query intervals. The examiner asserts that Bosloy does not teach away from current IGMP standards but improves upon them. Bosloy discloses modifications to the IGMP protocols to provide a technique to maximize effective bandwidth usage over limited resources. The examiner also asserts that the Appellant has not shown how Bosloy teaches away from the

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current invention. The Appellant has merely cited one line from Bosloy's "Background of the Invention" which deals with prior art IGMP standards. It is unclear to the examiner how referring to on section deal with the state of the prior art teaches away from the current application.

The Appellant argues that given Bosloy's disparagement of the IGMP standards and their corresponding queries, and Bosloy's corresponding complete avoidance in using and/or otherwise relying upon such queries, the Appellant asserts that the result of the cited combination of Bosloy and Liao would change the principle of operation of Bosloy.

The examiner respectfully disagrees. As discussed above, Bosloy discloses improvements upon the IGMP standards and their corresponding queries. As discussed above, Bosloy does disclose the queries. Liao was used in combination with Bosloy to teach the use and benefits of Internet Group Management Protocol (IGMP) V2 [page 2].

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Aravind K Moorthy/

Examiner, Art Unit 2131

Conferees:

/Syed Zia/

Application/Control Number: 10/524,285

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